Numbers
(Classifying activity)
Extension

Name: _____ ( ) **Class:_____**

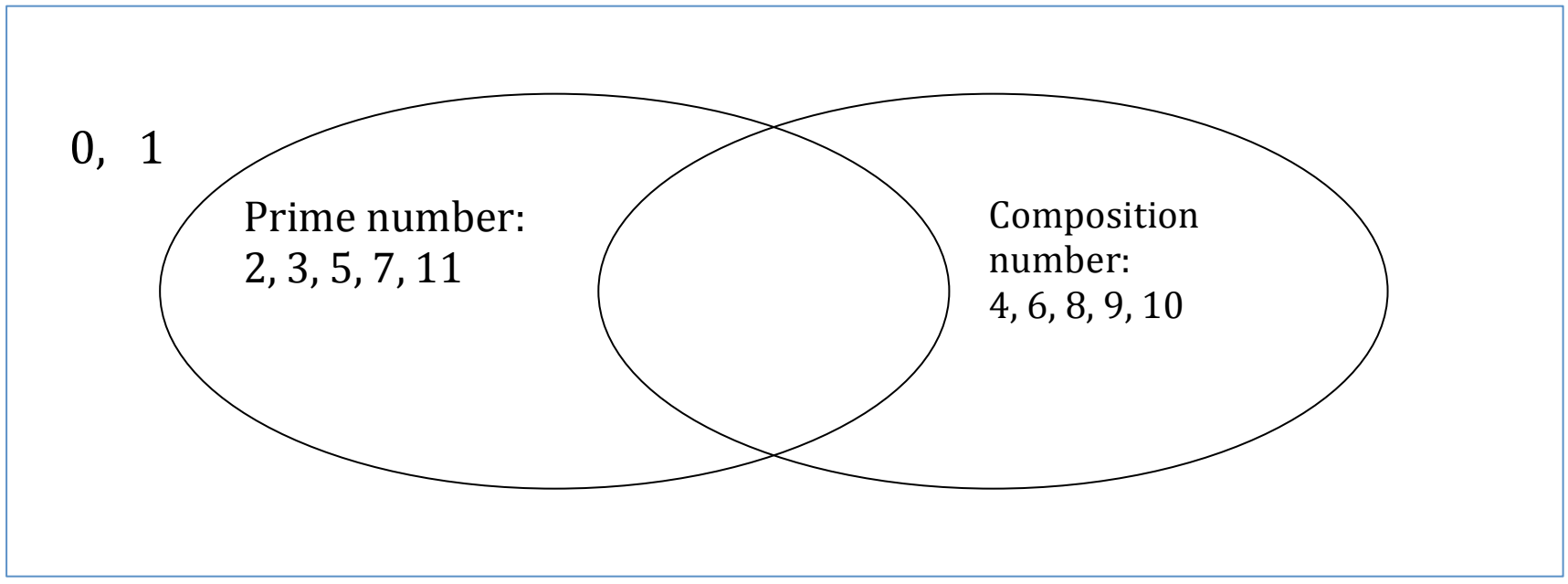
Given mathematical terms:	Given numbers:
Real Numbers, Rational Numbers, Irrational Numbers, Non-integers, Integers /Whole Numbers, Natural number, Negative Integers, Zero, Positive Integers, One, Prime Numbers, Composite Numbers, Decimals, Fractions, Percentages, Odd numbers, Even numbers.	$-5, -3, -1\frac{1}{2}, -\frac{3}{4}, 0, 1.2, \sqrt{2}, \pi, 4, 5$ **1, 2, 3, 6, 7, 8, 9, 10, 11** **8.9, -23.8, 40%, 34.5%**

Instructions:
Task 1:
Use the extra given mathematical terms to re-classify or further classify the numbers
You might need to organize the terms by yourself (Use classifying key).

Task 2:

1. **Study the given "mathematical notation" information.**
2. **Use some of the symbols from the "mathematical notation" information sheet to organize the numbers in set notation.**
   e.g. $\mathbb{N} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11\}$

Task 3:
Choose some of the numbers above and organize them by using Venn diagram.
You might make more then 1 Venn diagram.
e.g.



Mathematical Notation

1. Set Notation

$\in$	is an element of
$\notin$	is not an element of
$\{x_1, x_2, \ldots\}$	the set with elements $x_1, x_2, \ldots$
$\{x : \ldots\}$	the set of all x such that ...
$n(A)$	the number of elements in set A
$\varnothing$	the empty set
$\mathscr{E}$	the universal set
A'	the complement of the set A
$\mathbb{N}$	the set of positive integers, $\{1, 2, 3, \ldots\}$
$\mathbb{Z}$	the set of integers, $\{0, \pm1, \pm2, \pm3, \ldots\}$
$\mathbb{Z}^+$	the set of positive integers, $\{1, 2, 3, \ldots\}$
$\mathbb{R}$	the set of real numbers
$\subseteq$	is a subset of
$\subset$	is a proper subset of
$\not\subseteq$	is not a subset of
$\not\subset$	is not a proper subset of
$\cup$	union
$\cap$	intersection
$[a, b]$	the closed interval $\{x \in \mathbb{R}: a \leqslant x \leqslant b\}$
$[a, b)$	the interval $\{x \in \mathbb{R}: a \leqslant x < b\}$
$(a, b]$	the interval $\{x \in \mathbb{R}: a < x \leqslant b\}$
(a, b)	the open interval $\{x \in \mathbb{R}: a < x < b\}$

2. Miscellaneous Symbols

$=$	is equal to
$\neq$	is not equal to
$\equiv$	is identical to or is congruent to
$\approx$	is approximately equal to
$\propto$	is proportional to
$<$	is less than
$\leq$	is less than or equal to
$\not<$	is not less than
$>$	is greater than
$\geq$	is greater than or equal to
$\not>$	is not greater than
∞	infinity

3. Operations

$a + b$	a plus b
$a - b$	a minus b
$a \times b$, ab, $a.b$	a multiplied by b
$a \div b$, $\frac{a}{b}$, a/b	a divided by b
$a:b$	the ratio of a to b
$\sqrt{a}$	the positive square root of the real number a
$\lvert a \rvert$	the modulus of the real number a

4. SI Units (Système International d'Unités)

The international system of units uses seven base units. All other units are derived from these base units by multiplying or dividing one unit by another.

Physical quantity	Name of SI base unit	Symbol for unit
length	metre	m
mass	kilogram	kg
time	second	s
electric current	ampere	A
thermodynamic temperature	kelvin	K
luminous intensity	candela	cd
amount of substance	mole	mol

The last three items are used mainly in more advanced scientific work. For ordinary purposes, temperature is measured on the Celsius (Centigrade) scale. The temperature intervals of the Kelvin and the Celsius scales are similar.